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(54) Title: GLYCOPROTEIN COMPOSITIONS

(57) Abstract: The present invention concerns compositions comprising a glycoprotein having an Fc region, wherein about 80-100% of the glycoprotein in the composition comprises a mature core carbohydrate structure which lacks fucose, attached to the Fc region of the glycoprotein. The preferred glycoprotein is an antibody or immunoadhesin.



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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/33739

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 39/395; C12P 21/08

US CL : 424/133.1; 435/326

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/133.1; 435/326

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KOJIMA, N. et al. Characterization of Mouse ST8Sia II (STX) as a Neural Cell Adhesion Molecule-specific Polysialic Acid Synthase J. Biol. Chem. 09 August 1996, Vol 271, No. 32, pages 19457-19463, especially Table II, and page 19460;	1, 3-4, 7, 11, 16-19 and 25
Y	DAVIES, J. et al. Expression of GnTIII in a Recombinant Anti-CD20 CHO Production Cell Line: Expression of Antibodies with Altered Glycoforms Leads to an Increase in ADCC Through Higher Affinity of FcγRIII Biotechnol. Bioeng. August 2001, Vol 74, No. 4, pages 288-294, see entire document.	6, and 14
X, P	SHIELDS, R.L. et al. Lack of Fucose on Human IgG1 N-linked Oligosaccharide Improves Binding to Human FcγRIII and Antibody-dependent Cellular Toxicity J. Biol. Chem. 26 July 2002, Vol. 277, No. 30, pages 26733-40, especially abstract.	1-39



Further documents are listed in the continuation of Box C.



See patent family annex.

Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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**INTERNATIONAL SEARCH REPORT**

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**Continuation of B. FIELDS SEARCHED Item 3:**

MEDLINE, EMBASE, BIOSIS, SCISEARCH, CAPLUS

Glycoprotein, Fc fusion, FcgammaRIII, chimeric, humanized antibody, CD20, HER2, VEGF, CD40

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